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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,774	03/13/2003	Tracey Brown	DACO:002US	2305

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EXAMINER	
BERKO, RETFORD O	

ART UNIT	PAPER NUMBER
1618	

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/088,774	BROWN ET AL.	
	Examiner	Art Unit	
	Retford Berko	1618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 July 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *25-33,35-37 and 39-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *25-33,35-37 and 39-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Acknowledgement: Applicant's Amendment filed 7/27/05 is acknowledged.

Status of Claims

The status of the claims is as follows:

(a) Claims 1-13 are cancelled by applicant's preliminary amendment filed March 13, 2004.

(b) Claims 13-24, 34, 38 and 36 are cancelled by applicant.

(c) Claims 25-33 and 35-37 and 39-47 remain pending for review.

Claim Rejections- 35 USC 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 25-33 are rejected under 35 USC Sec 102(b) as anticipated by Sakurai et al (Japanese Kokai Patent Document No 61000017), Sho 61[1986]-17).

Sakurai et al teaches a method for inhibiting cancer metastasis (page 3, second to fifth parag.) using hyaluronic acid of molecular weight 4000-2,000,000 (page 5, 4the parag).

Claims 25-33 are anticipated by Sakurai et al Sho 61[1986]-17).

Claim Rejections- 35 USC 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 25-33 and 35-7 and 39-45 and 47 are rejected under 35 USC 103(a) as being unpatentable over Falk et al (US 6, 069, 135) in view of Balazs et al (US 4, 141, 973) further in view of Takahashi et al (US 6, 232, 301).

Falk et al (Patent '135) disclosed intravenous administration of drug and hyaluronic acid (col 21, lin 10-30, col 24, lin 30-35 continue to col 25, lin 15-25, said hyaluronic acid of molecular weight of lesss than 750, 000 (col 38, lin 20-30).

Falk et al does not teach the use of hyaluronic acid having molecular weight equal to 750,000 to 1,500,000.

Balazs et al (Patent '973) disclosed the use of hyaluronic acid having molecular weight equal to 750,000 to 1,200,000 (col 4, lin 45) for treatment of disease (col 4, lin 10-15). Balazs et al disclosed that the therapeutic value of hyaluronic acid solutions containing high-molecular weight hyaluronic acid is pronounced (col 3, lin 60-65) and that molecular weight of 750,000 to 1,2000,000 is preferred (col 4, lin 43-55).

Balazs et al did not teach the use of high molecular weight hyaluronic acid for treatment of cancer.

Takahashi et al (Patent '301) is relied upon for the disclosure that hyaluronic acid or hyaluronic acid salt can be administered to treat bladder conditions (col 9, lin 53-60) and that it is particularly effective for prostate cancer (col 10, lin 65-67 continue to col 11, lin 1-5).

One of ordinary skill in the art would have been motivated to use hyaluronic acid of higher molecular weight, rather than low molecular weight in combination with chemotherapeutic drug for treatment of cancer because Balazs et al disclosed that the therapeutic value of hyaluronic acid solutions containing high-molecular weight hyaluronic acid is pronounced (col 3, lin 60-65) and that molecular weight of 750,000 to 1,2000,000 is preferred (col 4, lin 45-65). Furthermore, Falk had previously shown that hyaluronic acid of molecular weight less than 750, 000 but greater than 150, 000 in combination with chemotherapeutic drug is effective in treating patients with cancer (col 21, lin 15-35 and col38, lin 19-30). Therefore the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time that it was made.

2. Claims 25-33 and 35-7 and 39-45 and 47 are rejected under 35 USC 103(a) as being unpatentable over Falk et al (US 5, 827, 834) in view of Balazs et al (US 4, 141, 973) further in view of Takahashi et al (US 6, 232, 301).

Faulk et al (Patent '834) disclosed intraperitoneal administration (col 27, lin 1-10) of a therapeutic composition comprising hyaluronic acid and other drugs for treatment of patients (Examples at cols 20-22), col 13, lin 60; col 14, lin 20-30, col 15, lin 50-65, col 22, lin 25-45, col 29, lin 25; col 30, lin 30-40 and col 35, lin 1030). Faulk further disclosed the use of hyaluronic

acid either before or after administration of antineoplastic agent (col 15, lin 50-65), suggesting that hyaluronic acid may improve the penetration or transport of drug (col 6, lin 60-65). Significantly, Falt disclosed the use of hyaluronic acid having molecular weight equal to less than 750, 000 but greater than 150, 000.

Falk et al (Patent '834) does not teach the use of hyaluronic acid having molecular weight equal to 750,000 to 1,500,000.

Balazs et al (Patent '973) disclosed the use of hyaluronic acid having molecular weight equal to 750,000 to 1,200,000 (col 4, lin 45) for treatment of disease (col 4, lin 10-15). Balazs et al disclosed that the therapeutic value of hyaluronic acid solutions containing high-molecular weight hyaluronic acid is pronounced (col 3, lin 60-65) and that molecular weight of 750,000 to 1,2000,000 is preferred (col 4, lin 43-55).

Balazs et al did not teach the use of high molecular weight hyaluronic acid for treatment of cancer.

Takahashi et al (Patent '301) is relied upon for the disclosure that hyaluronic acid or hyaluronic acid salt can be administered to treat bladder conditions (col 9, lin 53-60) and that it is particularly effective for prostate cancer (col 10, lin 65-67 continue to col 11, lin 1-5).

One of ordinary skill in the art would have been motivated to use hyaluronic acid of higher molecular weight, rather than low molecular weight in combination with chemotherapeutic drug for treatment of cancer because Balazs et al disclosed that the therapeutic value of hyaluronic acid solutions containing high-molecular weight hyaluronic acid is pronounced (col 3, lin 60-65) and that molecular weight of 750,000 to 1,2000,000 is preferred (col 4, lin 45-65). Falk had previously shown that hyaluronic acid of molecular weight less than

750, 000 but greater than 150, 000 in combination with chemotherapeutic drug is effective in treating patients with cancer (col 21, lin 15-35 and col38, lin 19-30). Moreover, one of rordinadry skill would expect to obtain effective transport of the drugs to sites in order to obtain the antiproliferative effects of the agents used in combination with hyaluronic acid because hyaluronic acid is shown to improve penetration of drugs into cells or tissues (Falk, Patent '834, col 13, lin 59-65 and col 14, lin 13-30). Therefore the invention as a whole would have been prima facie obvious to one of ordinary skill at the time that it was made.

The following prior art is considered relevant to applicant's claims and is placed on record but is not relied upon for the current rejection: (a) Harper (US5, 977, 088) disclosed effective amounts of hyaluronic acid and/or salts or homologs for application to the skin to facilitate transport of medicines and therapeutic agents into skin sites of a pathology and/or trauma e.g. carcinoma (col 8, lin 60, col 9, lin 40-44, lin 60-65) for treatment of the condition in the skin (col 14, lin 32-45). The reference is not relied upon for the present rejection because the instant claims are directed to oral or parenteral use of hyaluronic acid and drug only---applicant modified the claims to exclude transdermal use.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Retford Berko** whose telephone number is571-272-0590. The examiner can normally be reached on M-F from 8.00 am to 5.30 pm

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Thurman K Page**, can be reached on 571-272-0602.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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SUPERVISORY PATENT EXAMINER
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